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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/788,460
Filing Date: March 01, 2004
Appellant(s): BEJERANO ET AL.

John E. Curtin
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6-5-09 appealing from the Office action mailed 1-23-09.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

20050169222	Ayyagari et al.	8-2005
20060039281	Benveniste	2-2006
6504837	Menzel	1-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 5-9, 13-18 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayyagari US 20050169222A1 in view of Benveniste US 20060039281A1 and further in view of Menzel 6504837.

As to claim 1, Ayyagari discloses the method for providing a relative level of fairness and Quality of Service (QoS) [see par. 0015] comprising: identifying a set of non-interfering access points (see par. 0017); dividing the CFP into one or more slots (see fig. 2,4,6; par. 0042, 0049, 0021); assigning one or more of the so divided slots to an access point which is allowed to transmit based on the number of users associated with the access point (see fig. 2, 4, 6; par. 0049, 0071); assigning the so divided slots to access points (see fig. 2, 4, 6; par. 0030,0045-0049,0094-0101; allowing only the identified set of non-interfering access points to transmit during a Contention-Free Period (CFP) slot; and allowing all access points to transmit after the end of the CFP (see par. 0042-0057, 0074-0077). Ayyagari dos not specifically disclose a wireless local area network (WLAN) network. In an analogous art, Benveniste discloses the method for providing a relative level of fairness and Quality of Service (QoS)[see par. 0032] in a wireless local area network (WLAN) network [see par. 0012] comprising: identifying a set of non-interfering access points (see par. 0017); allowing only the identified set of non-interfering access points to transmit during a Contention-Free Period (CFP) slot; and allowing all access points to transmit after the end of the CFP (see par. 0108). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to use in a WLAN system the non-interfering techniques to avoid collisions and increase communication quality. The previous references fail to disclose to

maximize a lower bound of a slot-to-user ratio. In another analogous reference, Menzel discloses assigning the so divided slots to access points which share time slots which are allocated by load thereby maximize a lower bound of a slot-to-user ratio (see col. 4, line 64 – col. 5, line 50). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine this teaching to the modified Ayyagari and Benveniste system to increase the communication quality and increase bandwidth by managing the resources according to the loads

As to claim 5, Ayyagari discloses the method further comprising: assigning at least one so divided slot to each access point (see fig. 2, 4, 6; par. 0049).

As to claim 6, Ayyagari discloses the method further comprising controlling each access point making up the identified set of non-interfering access points to ensure each access point begins and ends a transmission during the CFP slot (see fig. 2, 4, 6; par. 0049).

As to claim 7, Ayyagari discloses the method further comprising: transmitting an instruction to initiate transmission of one or more beacon messages to prevent users associated with access points from transmitting prior to the beginning of the CFP (see par. 0045-0049).

As to claim 8, Ayyagari discloses the method further comprising: transmitting an instruction to initiate transmission of one or more beacon messages such that no two adjacent APs in an interference graph may send beacon messages substantially simultaneously (see par. 0045-0049).

As to claim 17, Ayyagari discloses the system further comprising one or more sets of non-interfering access points, each set of access points operable to: transmit during at least one Contention-Free Period (CFP) slot; and transmit after the end of the CFP (see par. 0045-0049).

Regarding claims 9, 13-16, 18 and 22-25 they are rejected for the same reasons already considered in claims 1 and 5-8 shown above.

(10) Response to Argument

Appellant asserts that Menzel does not disclose or suggest a maximization of a lower bound of a slot to user ratio, the examiner disagrees. The claim recites: "assigning one or more of the so divided slots to an identified access point based on the number of users associated with the access point and to maximize a lower bound of a slot-to-user ratio"; thereby, maximization of the lower bound to the user ratio is the desired effect of assigning the divided slot to an access point based on the number of the user associated with the access point. As previously disclosed in the final rejection, Menzel discloses assigning the number of divided slot to an access point based on the number of the user associated with the access point and repeating the process to adjust for the loading [# of users] of the access point (see col. 4, line 64 – col. 5, line 50). Therefore, the description in Menzel reads on the limitation of maximizing a lower bound of a slot to user ratio. Note appellant fails to clearly define "maximization of the lower bound" on the claimed language. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988

F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Thus, Menzel teaches the broad claimed limitations.

Also appellant states: "examiner appears to take the position that the phrase maximization of a lower bound of a slot-to-user ratio" can be interpreted to mean any disclosure of a slot-to-user ratio. This is incorrect. Words in a claim cannot be ignored in interpreting the claim. Thus, it is inappropriate for the Examiner to ignore the words "maximization of a lower bound" of a slot-to-user ratio."; as explained in the prior paragraph Menzel discloses assigning the number of divided slot to an access point based on the number of the user associated with the access point and repeating the process to adjust for the loading [# of users] of the access point, so the wireless resources are maximized (see col. 4, line 64 – col. 5, line 50). Therefore, the examiner applied the broadest reasonable interpretation based on the claimed language.

Further, appellant argued that "the Examiner's statement that his interpretation is based on paragraph [0037] (see the Advisory Action) of the instant specification is confusing. This paragraph clearly describes more than a slot-to-user ratio; it describes a maximization of a lower bound of such a ratio."; the advisory action did not said that interpretation is based on paragraph [0037]; the advisory action recited that the interpretation was consistent with paragraph 37 of the specification.

According to the appellant Menzel's general statement that its time slot allocation is "load-dependent" reveals little to one skilled in the art."; please, note that slot to user ratio is a loading ratio, and Menzel discloses much more than load-dependent, he discloses to assign the slots of the access point to maximize the wireless resources as

previously shown above and the office action in record (see col. 4, line 64 – col. 5, line 50). Therefore, the combination of Ayyagari Benveniste and Menzel disclose all the limitations of the claims.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Marcos L Torres/

Examiner, Art Unit 2617

Conferees:

/George Eng/

Supervisory Patent Examiner, Art Unit 2617

/NICK CORSARO/

Supervisory Patent Examiner, Art Unit 2617